The
HIE
Puzzle

Putting it together for EMS

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When we talk about exchange

This isn't the kind of exchange
we are referring to.

Health Information Exchange is like a Black Box

Stuff Goes In – Stuff Comes Out

Principles and Strategy for Accelerating Health Information Exchange (HIE)

- As a nation, we are transforming healthcare delivery into a system that is patient-centered and value-based
- New initiatives include accountable care organizations (ACOs), bundled payments, health and medical homes, and reductions in payment for hospital readmissions
- Critical to the success of these programs … is real-time **interoperable HIE** among a variety of healthcare stakeholders
- Greater access to person-level health information is integral to improving the quality, efficiency, and safety of healthcare delivery

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Principles and Strategy for Accelerating Health Information Exchange (HIE)

- Interoperability is generally accepted to mean the ability of two or more systems or components to exchange information and use the information that has been exchanged
- There are two steps necessary for interoperability
  - the ability to *exchange* information; and
  - the ability to *use* the information that has been exchanged
- The actual exchange of health information needs to be both interoperable and electronic across a myriad of information systems … to realize a patient-centered, value-driven healthcare system
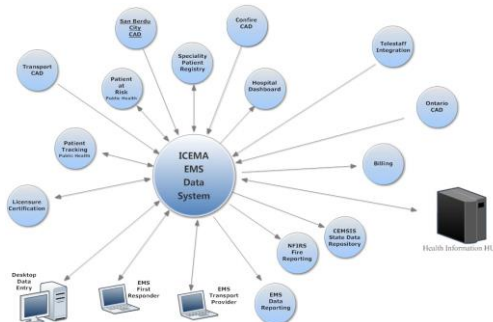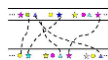
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The lab called with my blood test results and my blood type has changed from "A Positive" to Mountain Roast.
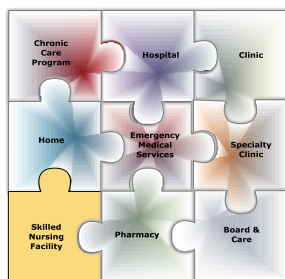
ICEMA EMS Data System

- Standardizes definitions for EMS data collection
- Centralizes management of EMS related data
  - ➢ Patient reporting and documentation
  - ➢ Care review
  - ➢ Process improvement
- Enables data integration for specialty patients (Trauma, Stroke, STEMI)
- Provides data linkage between EMS providers and hospitals
- Facilitates the exchange of health information between stakeholders
- Enables data consistency and interoperability
- Provides a repository for reporting of EMS specific data to the State

Health Information Exchange

Putting the pieces of the puzzle together

- Health Information Exchange allows for the sharing of health information between multiple providers
- Health Information Exchange transports information within related organizations or provides connections across disparate disciplines
- The missing link in the continuum of healthcare has been Emergency Medical Services (EMS)

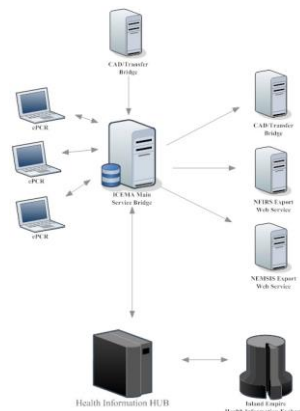## Building the ICEMA HIE Infrastructure

- The cornerstone of the current EMS HIE is the ICEMA EMS Data System
  - The ICEMA EMS Data System standardizes data elements for all providers and makes them available for exchange
- The Health Information Hub mobilizes the information into a format that is ready for transmission to the Health Information Exchange and back to EMS providers
- The Health Information Exchange allows doctors, clinics, hospitals and other healthcare providers such as EMS to review and access medical records from a myriad of disparate providers including EMS

Getting It From Here to There… and Back

- Health Information is carried through the ICEMA Health Information HUB and the Health Information Exchange to and from others involved in the continuum of care
- Data mobility is achieved through partnerships with local HIE organizations that specialize in data exchange
- Information is transferred bilaterally through the Health Information Exchange between hospitals, clinics, pharmacies, doctors and EMS providers
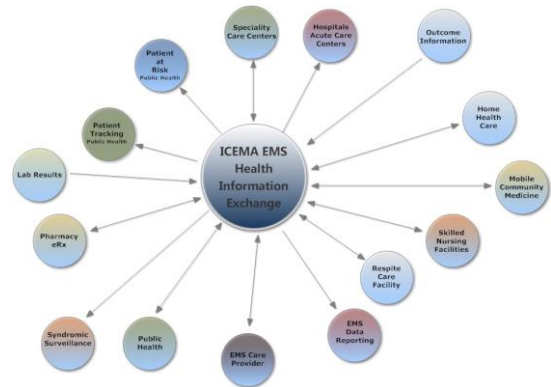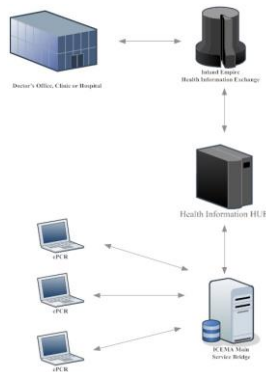
Getting it From Here to There

1. EMS Field Providers enter health information into the ePCR which is posted to the ICEMA Main Service Bridge
2. The ICEMA Main Service Bridge provides the information to the ICEMA EMS HUB
3. The ICEMA EMS HUB translates the information provided into a format acceptable to the HIE
4. The HIE distributes the information to other providers

Getting it Back

1. The HIE responds to a request from an EMS provider through the Health Information Exchange
2. It is translated by the EMS HUB into a format understood by the ICEMA Main Service Bridge
3. The ICEMA Main Service Bridge sends the information requested back to the EMS provider
4. Information EMS receives may consist of repeat patient information, demographics, past medical history, medications and outcomes

EMSA-ICEMA Update

Completed HIE Grants

ICEMA Base Hospital Record (eBHR)
- ICEMA worked with ImageTrend to develop processes to allow base hospitals to view a properly posted EMS ePCR.
- Evaluated replacing hospital generated paper form with an all electronic form.
- Additional components and enhancements necessary for full functionality:
  - Standardized hospital equipment
  - Develop criteria for the transfer of data between the field and hospital
  - Single tab standardized form
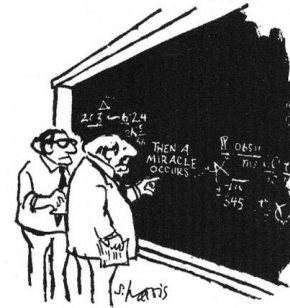 - Addition of fields for entry

ePCR Expansion
- Contracts signed and approved by the respective Boards
- Northern California EMS, Sierra-Sacramento Valley and North Coast EMS are fully implemented and providing data to CEMSIS.

State Data Repository
- The State Data Repository exceeded 2 million records in November 2014.
- October 1, 2014, California became the first state to transmit NEMSIS Version 3 data from CEMSIS to NEMSIS.

HIE is more than a black box--It's a miracle

"I think you should be more explicit here in step two."

On Behalf of ICEMA THANK YOU!

References

- **Principles and Strategy for Accelerating Health Information Exchange (HIE)**
  http://healthit.gov/sites/default/files/acceleratinghieprinciples_strategy.pdf